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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/523,130
Filing Date: August 24, 2005
Appellant(s): BERNIG ET AL.

William C. Gerstenzang
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/08/2010 appealing from the Office action mailed 06/22/2009.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-5, 7-21 and 23-26.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

5763095	Ramesh et al.	07-1998
2002/0034622	Edwards et al.	03-2002
6333061	Vadhar	12-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 6-13, 15-21 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh et al. (US 5,763,095, hereinafter "Ramesh") in view of Edwards et al. (US 2002/0034622, here in after "Edwards").

In regards to claim 1, Ramesh discloses a multilayer film having a combination of relatively low oxygen transmission and relatively high carbon dioxide transmission (col.

1 lines 5-8). The structures contain layers that comprise EVOH and CPA-3 (col. 13 example 9). CPA-3 refers to a nylon 6.6/6,9/6I terpolymer (col. 7 lines 37-30), where the terpolymer comprises hexamethylene amide (col. 4 lines 5-6), which corresponds to applicants "multipolyamide" comprising component I as the 6,6, component II as the 6,9 and/or 6,10 and component III as the 6I. The preferred terpolymers include 66/69/61, where 1 refers to isophthalic acid mer, 66/69/6T, 66/610/61, and 66/610/6T (cols. 3-4 line 67 and lines 1-4). Ramesh discloses that the nylon copolymer used in the film may be blended with another resin (col. 5 lines 1-2). The nylon copolymer may be blended with another oxygen barrier resin such as ethylene vinyl alcohol copolymer (EVOH) in order to achieve a desired set of properties (col. 5 lines 3-5). Because EVOH loses much of its oxygen barrier properties with increasing relative humidity, the overall CO_2:O_2 transmission ratio during cure would not be greatly affected; but, the oxygen barrier during storage, when oxygen barrier properties become important, would be increased (col. 5 lines 6-10). That is, the addition of ***at least*** a minor portion of EVOH to a nylon copolymer-containing layer of the film of the present invention would serve to lower the oxygen transmission rate of the total film structure at low relative humidities (col. 5 lines 10-14). In example 11, the amount of EVOH used was 10% (cols. 15-16).

In regards to claim 2, Ramesh discloses a multilayer film comprising of a terpolymer that comprises 10-60% by weight hexamethylene adipamide, 10-60% by weight polyamide mer and 10-60% by weight hexamethylene isophthalamide mer (col. 4 lines 4-7). The examiner notes that the instant claims are in mol%, however, the compounds are comparatively the same and the conversion between percent by weight

and mol% would be comparatively the same. The ranges of Ramesh are within the majority of the broad range in the applicants claim.

In regards to claims 3-4, Ramesh discloses that it is preferred the terpolymer in the multilayer filme comprises 20-50% by weigh hexamethylene adipamide mer, 20-50% by weight polyamide mer, and 10-40% by weight hexamethylene isophthalamide mer (col. 4 lines 8-11). These ranges are within the majority of the broad range of the applicant.

In regards to claims 5, 24 and 25, Ramesh discloses that the EVOH used in the multilayer film is an ethylene vinyl alcohol copolymer having 44-mole percent ethylene (col. 8 lines 5-6).

In regards to claims 6-7, Ramesh discloses that the nylon copolymer may be blended with another oxygen barrier resin such as ethylene vinyl alcohol copolymer (EVOH) in order to achieve a desired set of properties (col. 5 lines 1-5). The blends can range from 1-99% of the partially aromatic nylon and 99-1% of the second material, more preferably 25-75% of the partially aromatic nylon and 75-25% of the second material (col. 5 lines 41-44).

In regards to claim 11, Ramesh discloses a film that contains and EVOH and nylon copolymer-containing layer that lowers the oxygen transmission rate of the total film structure (col. 5 lines 10-14). The film contains an oxygen gas barrier layer with at least 2 outer layers (col. 13 example 9).

In regards to claim 12, Ramesh discloses that a tie layer is provided between said nylon copolymer layers and said further polymeric layer. The adhesive layer

comprises a modified polyolefin capable of adhering to each of said nylon copolymer layer and said further polymeric layer (col. 20 claim 14). The coupling agent layer in the applicants claim is preferably a modified polyolefin (pg. 6 lines 13-15). Thus, the adhesive layer is comparatively the same as the coupling agent layer, because of the use of a polyolefin in both Ramesh and the applicant.

In regards to claim 13, Ramesh discloses that the tie layers of the film comprise modified polyamides and modified polyolefins (col. 6 lines 63-65). The modified polyamides refer to polymers having anhydride functionality grafted onto (col. 3 lines 33-36). A specific example is "modified ethylene vinyl acetate copolymer" (col. 3 lines 29-30). The polyolefin is LLDPE (col. 2 lines 43-46).

In regards to claim 15, Ramesh discloses that the film is stretched either in a longitudinal direction, a transverse direction, or both (col. 1 lines 42-55).

In regards to claim 16, Ramesh discloses that the film is partially or completely cross linked (col. 6 lines 4-5).

In regards to claim 17, Ramesh discloses that the film is to incorporate a shrink feature (col. 1 lines 48-49).

In regards to claim 18, Ramesh discloses that the film material is suitable for using in packaging oxygen sensitive products which emit carbon dioxide gas, such as high gassing cheeses (abstract).

In regards to claim 19 and 21, Ramesh discloses that it is common in the packaging of high gassing chesses to package the cheese product in a film, cure the cheese, and then store the cheese, prior to purchase by the consumer (col. 4 lines 30-

35). Thus, the process of curing the cheese after packaging implies that the cheese is still ripening.

In regards to claim 20, Ramesh discloses that the film material is used to package cheese (abstract). It would be obvious to one of ordinary skill in the art that cheese can be either semi-hard or hard.

In regards to claim 26, Ramesh discloses that the outer nylon layers are heat sealable (col. 20 lines 57-58).

Ramesh is silent with regards to the use of the mixture of EVA and LLDPE and the packaging film being a pouch.

In regards to claims 9-10, Ramesh discloses the nylon copolymer of the film material of the present invention may be blended with other polymer material in order to achieve or optimize one or more desired film properties (col. 5 lines 33-36). The specific resins that may be employed include ethylene, propylene and butane homopolymers and copolymers, both heterogeneously and homogenously catalyzed (col. 6 lines 35-38). A layer of EVA-2 and HDPE is used in the multilayer structure (col. 13 example 9). It would be obvious to one of ordinary skill in the art to provide a layer, which comprises EVA and LLDPE to produce a more flexible multilayer film material than that when HDPE is used in the film.

In regards to claim 23, Ramesh discloses a packaging film (col. 1 line 5). The packaging film is used to allow cheese to ripen over time before sold to the consumer. The nylon layers are heat sealable (col. 20 lines 57-58). It would be obvious to one of ordinary skill in the art at the time of the invention that the packaging film is heat

sealable, thus would be able to form closed sides to form a pouch structure. Also, a pouch is a conventional packaging method.

Ramesh is silent with regards to the exact percentages claimed by applicant of the blend of the polyamide and EVOH.

Edwards discloses a package for foodstuffs that produce gas, particularly CO_2 respiring foodstuffs, especially cheeses [0002]. The invention is a multilayer film having a high carbon dioxide permeability and relatively low oxygen permeability which is controlled by a thin core layer [0038]. The core layer is a blend of EVOH and nylon [0041]. The core layer comprises a blend of about 30-80 wt% of ethylene vinyl alcohol copolymer and about 20-70 wt% nylon [0047]. The ethylene content of the EVOH is about 39 mol% or higher [0047]. The core layer when used for a low CO_2 permeability application will generally have a greater amount of EVOH and lesser amounts of nylon to produce a film having a low CO_2 gas transmitting rate, particularly when using an EVOH copolymer having an ethylene content of about 48 mol% [0055]. The appropriate blend proportions to achieve the desired level of gas permeability may be determined in view of the present specification without undue experimentation [0055].

The proportions of blending of the EVOH and nylon can be determined by routine experimentation as stated by Edwards. Thus, it would be obvious to one of ordinary skill in the art that the proportions in which the EVOH and nylon are blended to form the core layer of the packaging film of Edwards can used for the oxygen barrier layer of Ramesh to form a package that desires to have a low CO_2 gas transmitting rate, such as cheese packaging.

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh et al. (US 5,763,095, hereinafter "Ramesh") in view of Edwards et al. (US 2002/0034622, here in after "Edwards") in view of Vadhar (US 6,333,061).

In regards to claim 14, the combination of Ramesh and Edwards discloses the packaging film as discussed in the previous section. The combination is silent with regards to a colored coupling agent layer. Vadhar discloses a multilayer film suitable for packaging that contains a tie layer with a polymeric adhesive, an anhydride grafted polyolefins blend, a coloring agent, LDPE and EVA (table 9). It would be obvious to one of ordinary skill in the art to use the coloring agent tie layer in Vadhar with the multilayer film of the combination of Ramesh and Edward to form a colored package that could be used for marketing strategies.

(10) Response to Argument

The corrected declaration under 37 CFR 1.132 filed 02/23/2010 is insufficient to overcome the rejection of claims 1-5, 7-21 and23-26 based upon 35 U.S.C. 103(a) as being unpatentable over Ramesh et al. (US 5,763,095, hereinafter "Ramesh") in view of Edwards et al. (US 2002/0034622, here in after "Edwards") and Ramesh et al. (US 5,763,095, hereinafter "Ramesh") in view of Edwards et al. (US 2002/0034622, here in after "Edwards") in view of Vadhar (US 6,333,061).as set forth in the last Office action because: The applicant provides a declaration that demonstrates that the barrier layer of EVOH and multipolyamide, when having a ratio of 20:80, respectively, has a higher

oxygen permeability than when the ratio is 30:70. Thus, the applicant has discovered unexpected results because the barrier layer with the higher content of EVOH has a higher oxygen permeability rate. The declaration is insufficient to overcome the rejection, because the declaration does not provide evidence that the two references that are disclosed by the Office cannot be combined to form the multilayer film as claimed by applicant. The combination of Ramesh and Edwards provides a multilayered film that has a multipolyamide with an EVOH content of at least 39 mol%.

The applicant argues that the Edwards reference only provides the oxygen barrier properties with nylon 6/66 is combined with EVOH. The applicant asserts that only nylon 6/66 can be used in the barrier layers of Edwards, thus there would be no motivation to combine with Ramesh.

In response, Edwards discloses that it is preferable to use nylon 6/66 in the composition, however nylon 11 may also be used [0074]. Also, note that while Edwards do not disclose all the features of the present claimed invention, Edwards is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the amount of EVOH that is used in oxygen barrier layer, in order to (motivation) and in combination with the primary reference, discloses the presently claimed invention.

The applicant argues that only a minor portion of EVOH should be incorporated in the nylon-copolymer containing layer.

In response, Ramesh discloses that the nylon copolymer may be blended with another oxygen barrier resin such as ethylene vinyl alcohol copolymer (EVOH) in order to achieve a desired set of properties (col. 5 lines 3-5). Because EVOH loses much of its oxygen barrier properties with increasing relative humidity, the overall CO_2:O_2 transmission ratio during cure would not be greatly affected; but, the oxygen barrier during storage, when oxygen barrier properties become important, would be increased (col. 5 lines 6-10). That is, the addition of ***at least*** a minor portion of EVOH to a nylon copolymer-containing layer of the film of the present invention would serve to lower the oxygen transmission rate of the total film structure at low relative humidities (col. 5 lines 10-14). In example 11, the amount of EVOH used was 10% (cols. 15-16). It clearly is shown that Ramesh discloses that the addition of EVOH does not greatly affected, thus the low oxygen transmission rate already being achieved by the resin is maintained at high humidities. Also, Ramesh does not recommend that only a minor portion be used in the blend. Ramesh discloses that ***at least*** a minor portion of EVOH be used in the blend, which mean that no less than a minor portion should be used. Thus, Ramesh does not teach away from using greater amounts of EVOH but actually encourages the use of EVOH because it allows the layer to have a stable oxygen barrier properties under high humidities but is advantageous under lower humidities because it lowers the transmission of oxygen.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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